

CLAIMS

✓ Please cancel claims 53-59.

60. (Amended) A semiconductor processing method of depositing SiO_2 on a substrate comprising:

G¹ providing a substrate within a chemical vapor deposition reactor;

feeding a gaseous silicon precursor into the chemical vapor deposition reactor;

feeding gaseous H_2O_2 into the chemical vapor deposition reactor; and

utilizing the silicon precursor, depositing SiO_2 over a surface of the substrate at a rate of about 7000 Å per minute to form a layer of SiO_2 .

61. The semiconductor processing method of claim 60 wherein the gaseous H_2O_2 and the gaseous silicon precursor are fed into the chemical vapor deposition reactor independently.

62. The semiconductor processing method of claim 60 wherein the gaseous H_2O_2 and the gaseous silicon precursor are fed into the chemical vapor deposition reactor simultaneously.

63. (Amended) The semiconductor processing method of claim 60 wherein the gaseous H_2O_2 and the gaseous silicon precursor are comprised by a gaseous mixture which is fed into the chemical vapor deposition reactor.

64. The semiconductor processing method of claim 60 further comprising feeding gaseous H₂O into the chemical vapor deposition reactor.

✓65. (Cancelled).

G¹ 66. The semiconductor processing method of claim 60 wherein the surface of the substrate comprises a high aspect ratio topology and wherein the layer is conformally deposited over the topology.

67. The semiconductor processing method of claim 60, wherein the silicon precursor is selected from the group consisting of: tetraethoxysilane (TEOS), diethylsilane (DES), tetramethylcyclo-tetrasiloxane (TMCTS), fluorotriethoxysilane (FTES), and fluorotrialkoxysilane (FTAS).

68. (New) The semiconductor processing method of claim 60 wherein the depositing is conducted at a processing temperature of about 400°C.

G² 69. (New) The semiconductor processing method of claim 60 wherein the depositing is conducted at a processing temperature of from about 640°C to about 900°C.

70. (New) The semiconductor processing mixture of claim 63 wherein the gaseous mixture comprises from about 5% to about 15% by volume of H₂O₂.
